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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/630,425	08/01/2000	Stefano Faccin	017.38841X00	5695

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EXAMINER

CHAI, LONGBIT

ART UNIT PAPER NUMBER

2131

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/630,425

Applicant(s)

FACCIN ET AL.

Examiner

Longbit Chai

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. No claim for priority has been made in this application.
2. The effective filing date for the subject matter defined in the pending claims in this application is 8/1/2000.

Specification

3. The abstract of the disclosure is objected to because the abstract paragraph exceeds 150 words. Correction is required. See MPEP § 608.01(b).
4. The disclosure is objected to because of the following informalities:
5. (a) One sentence contains two verbs. See page 6, line 19. It is written as "The 407 responds contains ..".
6. (b) The message "401 Unathorized" shown on Figure 1 has spelling error. It should be labeled as "401 Unauthorized".
7. (c) The acronym should be defined on the first appearance instead of after that. For example, RES and AUTS that first appears on page 6, line 12 are later defined on page 8, line 11 – 12. See 37 CFR 1.71.
Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 1 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Handley (SIP, IETF RFC 2543, March 1999), hereinafter referred to as Handley, in view of 3G TS 33.102 (3G Security, TS 33.102 Version 3.5.0 Release 1999), hereinafter referred to as 3G TS 33.102, and evidenced by Turunen (U.S. Patent Number 6,477,644).

9. As per claim 1 and 9, Handley teaches authenticating a user agent to a server using SIP (Session Initiation Protocol) messages, the method comprising:

- a. *forwarding an SIP request from the user agent to the server* (Handley: inter alia, Section 1.4).
- b. *forwarding a request for authentication from the server to the user agent in response to the SIP request, the request for authentication including information* (Handley: inter alia, Section 6.42 and Section 7.4.8).
- c. *forwarding an authentication response from the user agent to the server in response to the request for authentication* (Handley: inter alia, Section 6.11 and Section 6.27).
- d. *performing an invoked SIP procedure on the server in response to the SIP request if the authentication is deemed successful in view of the authentication response* (Handley: inter alia, Section 7 and Section 5.1.1).

10. Handley discloses SIP authentication scheme that includes currently existing HTTP-Basic, PGP and MD (See inter alia, Section 14.2, Section 15.1 and Section 14.3, respectively). Handley also discloses specifications for the

Art Unit: 2131

associated request and response header fields to carry the authentication parameters in the SIP messages (See inter alia, Section 6.26, Section 6.42, Section 7.4.2, and Section 7.4.8). Handley does not explicitly disclose the authentications associated with mobile systems listed as follows:

- a. *the authentication performed using a UMTS (Universal Mobile Telecommunications System) AKA (Authentication and Key Agreement) mechanism.*
- b. *an authentication response from the user agent to the server in response to the request for authentication in accordance with the UMTS AKA mechanism.*

11. 3G TS 33.102 teaches the mobile system authentication mechanisms:

- a. *the authentication performed using a UMTS (Universal Mobile Telecommunications System) AKA (Authentication and Key Agreement) mechanism (3G TS 33.102: inter alia, Section 6.3.2).*
- b. *an authentication response from the user agent to the server in response to the request for authentication in accordance with the UMTS AKA mechanism (3G TS 33.102: inter alia, Section 6.3.3).*

12. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of 3G TS 33.102 within the system of Handley because mobile system UMTS builds on the success of the second generation mobile network GSM, the UMTS AKA authentication parameters including the random number RAND, and authentication token AUTN disclosed by 3G TS 33.102 (as described at item (5) above) are virtually and dynamically changing a new session authentication key similar to GSM that have

been used over 10 years in the art as a strong security scheme to protect the sensitive information over the insecure open air space.

13. Furthermore, this motivation of combining is evidenced by Turunen.

Turunen discloses a corporate user will have the opportunity to make wireless voice and data calls from a mobile terminal via corporate LAN to gain internet access from mobile hosts or terminals (See inter alia, Column 1, Line 65 – 67 and Column 1 Line 36 – 40). Turunen also discloses the security problem that the internet is not a secure network and it is possible for third party to intercept internet traffic (See inter alia, Column 3, Line 34 – 36). Turunen further discloses a way to improve security is to allocate new authentication keys to a mobile host whenever a mobile host makes a new internet access request (See inter alia, Column 3, Line 43 – 46).

14. Therefore, the modification would have been obvious because one of ordinary skill in the art would have been motivated to add UMTS AKA authentications of the mobile systems into SIP messages of IP-based networks.

15. As per claim 2 and 10, Handley-3G TS 33.102-Haikonen teaches the claimed invention as described above. Handley further teaches the SIP request comprising one of an SIP INVITE request or an SIP REGISTER request (Handley: inter alia, Section 4.2.6).

16. As per claim 3 and 11, Handley-3G TS 33.102-Haikonen teaches the claimed invention as described above. Handley further teaches *the request for authentication comprising one of an SIP 401 Unauthorized code or an SIP 407*

Art Unit: 2131

Proxy Authentication Required code (Handley: inter alia, Section 7.4.2 and Section 7.4.8).

17. As per claim 4 and 12, Handley-3G TS 33.102-Haikonen teaches the claimed invention as described above. 3G TS 33.102 further teaches *the request for authentication comprising UNITS AKA RAND (RANDom challenge) and AUTN (authentication token) vectors* (3G TS 33.102: inter alia, Section 6.3.2).

Same rational for combination applies here as above in rejecting claim 1.

18. As per claim 5 and 13, Handley-3G TS 33.102-Haikonen teaches the claimed invention as described above. 3G TS 33.102 further teaches further teaches *the RAND and AUTN factors* (3G TS 33.102: inter alia, Section 6.3.2).

Handley further teaches authentication factors being *included in an SIP*

WWW-Authenticate or Proxy Authenticate response header field (Handley: inter alia, Section 6.4.2 and Section 6.4.6). Same rational for combination applies here as above in rejecting claim 1.

19. As per claim 6 and 14, Handley-3G TS 33.102-Haikonen teaches the claimed invention as described above. 3G TS 33.102 further teaches *the authentication response comprising one of a UMTS AKA RES (response) code or an RUTS (synchronization failure parameter) code or an error code* (3G TS 33.102: inter alia, Section 6.3.3). Same rational for combination applies here as above in rejecting claim 1.

20. As per claim 7 and 15, Handley-3G TS 33.102-Haikonen teaches the claimed invention as described above. Handley further teaches *the*

Art Unit: 2131

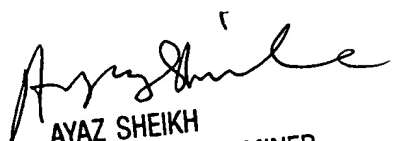
authentication response being included in an SIP Authorization or Proxy Authorization header field (Handley: inter alia, Section 6.11 and Section 6.27).

21. As per claim 8 and 16, Handley-3G TS 33.102-Haikonen teaches the claimed invention as described above. Handley further teaches *the invoked procedure comprising an acknowledgement response comprising an SIP 200 code* (Handley: inter alia, Section 7.2.1).

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Haikonen (U.S. Patent Number 6,693,886) discloses "Method and Apparatus for Conducting Mobile Communication over IP Networks".
- b. Fan (Vehicular Technology Conference Proceedings, IEEE 51st, Volume: 3, 15-18 May 2000) discloses "Satellite-UMTS Service Provision Using IP-Based Technology".


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